

Type in the U. S. National Herbarium, no. 1963637, collected on lower slopes of big sand hill, Eureka Valley, Inyo County, California, alt. 3,050 feet, May 24, 1949, by Annie M. Alexander and Louise Kellogg (no. 5655).

Regarding the locality Miss Alexander writes: "The sand hill stands over 600 feet higher than the floor of the valley and is a ghostly looking mound seen from a distance. The dense tussocks of the coarse grass, scattered here and there, were

growing for a short distance up the north slope . . . the roots were deeply imbedded in the sand."

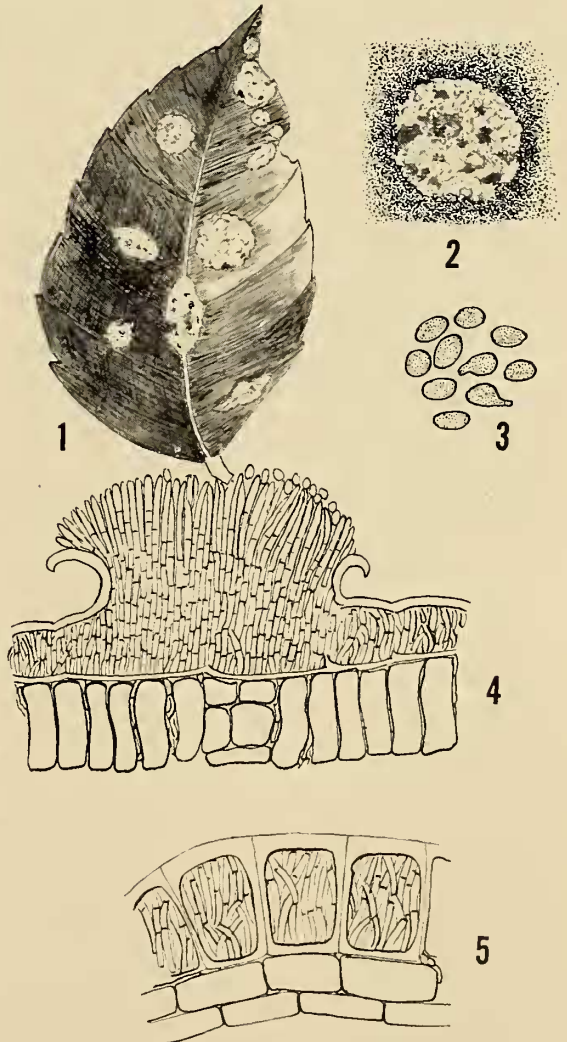
This genus belongs to the tribe Festuceae, although the glumes are nearly as long as the spikelet, which might indicate some affinity with the Aveneae. The characters are so distinctive that it is difficult to determine its actual relationship in the tribe. The appearance of the spikelets suggests *Tridens*, but the characters are completely different.

MYCOLOGY.—*Elsinoë viticola* from India.¹ M. J. THIRUMALACHAR, Hindu University, Benares, India. (Communicated by ANNA E. JENKINS.)

During the course of the studies on spot anthracoses in Mysore, South India, collections were made on *Tetrastigma sulcatum* Gamb. near Kemmangundi at an altitude of 4,800 feet above sea level. *T. sulcatum* is a climbing shrub belonging to the Vitaceae developing pedately compound leaves. The infection spots were noticed on the leaves in the form of circular patches. A cursory study indicated that the fungus was identical with *Elsinoë viticola* Racib. described by Raciborski (1900) from Java on *Tetrastigma coriaceum* (= *Vitis coriacea*), an account of which is presented by Bitancourt and Jenkins (1943).

The infection patches on the lamina of *Tetrastigma sulcatum* are at first chalky white with a corrugated surface. They are circular with sinuous outline, slightly more elevated than the leaf surface and coalescing with one another when in close juxtaposition. Some of the infection patches involving the midrib or the veinlets are more linear or elongated in outline, showing a tendency to spread in the same direction as the veins (Fig. 1). In older stages the infection patches gradually turn grayish brown with islands of black patches (Fig. 2). Raciborski described the infection patches bearing the ascomata of *E. viticola* as being chocolate-brown in color, and Arnaud (1925) described it as superficially resembling the patches of the parasitic alga *Cephaleuros virescens*.

Sections through the young infection indicated the *Sphaceloma* stage of the fungus, which is so far unknown. The initials of the acervuli are formed by the grouping of the



FIGS. 1-5.—1, Leaflet of *Tetrastigma sulcatum* showing infection spots of *Elsinoë viticola*, about three-fourths natural size; 2, enlarged view of the infection spot, $\times 2\frac{1}{2}$; 3, conidia, $\times 750$; 4, acervulus, $\times 300$; 5, development of sori initials within the epidermis, $\times 300$.

¹ Received October 7, 1949.

hyphal strands within the epidermis (Fig. 5). Several epidermal cells in a row are involved and a large stroma is formed. These epidermal cells enlarge in size and very soon the upper wall ruptures exposing the conidial stroma (Fig. 4). The conidia (Fig. 3) are produced in abundance acrogenously and these are ovate to spherical, thin-walled, hyaline, measuring 4.5–6 by 4–4.5 μ .

The infection patch presents a whitish appearance when the conidia are abundant. As it turns grayish white with black patches, no more conidia can be observed and the stroma becomes large and pulvinate. Though the material was immature early indications of the development of asci were seen in few cases, and further studies are being made to study the ascigerous stage.

As already reviewed by Bitancourt and Jenkins (1943), *Elsinoë viticola* was described by Raciborski from Java and has so far not been collected again in the same or any other locality in spite of repeated search. The type collection of *E. viticola* has been critically examined by Arnaud (1925) and Bitancourt and Jenkins (1943), but on the particular material sectioned all failed to notice any ascigerous stage. Our knowledge of the ascus and ascospores is based therefore on

the descriptions given by Raciborski. In the sections through the stroma of *E. viticola* collected by Raciborski, Bitancourt and Jenkins found other saprophytes such as *Phyllosticta* sp., and only hyaline hyphae typical of *Elsinoë* could be made out. *Sphaeceloma* stage of the fungus was so far unknown.

The present collection of the fungus on *Tetrastigma sulcatum* from Mysore is the first record to be made outside the type locality in Java. It is also of interest because attempts to recollect the fungus in the type locality since Raciborski's record of it have been unsuccessful (cf. Bitancourt and Jenkins, 1943). Another *Elsinoë* on Vitaceae described from the Eastern Hemisphere is *Elsinoë cissi* Jenkins and Bitancourt (1946) on *Cissus* sp. from Uganda.

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ZOOLOGY.—*A revision of some Actiniaria described by A. E. Verrill.*¹ OSKAR CARL-GREN, Zoological Institution, Lund, Sweden. (Communicated by WALDO L. SCHMITT.)

Through the kindness of the Smithsonian Institution and the American Museum of Natural History, I have been able to revise certain species of Actiniaria described by Verrill. Except for *Sagartia leucolea*, all specimens examined were identified by him.

Edwardsia sulcata Verrill

In 1864 (p. 29) Verrill described a species, *Edwardsia sulcata*, the body of which was provided with 12 distinct longitudinal furrows. Andres (1883, p. 317) referred it to the genus *Halcampa*. The presence of the 12 furrows indicates that there may have been 12 mesenteries the whole length of the body. Taken for granted that the description made by Verrill is correct, his species can not be ranged in the genus *Ed-*

wardsia. The holotype is probably lost, but in the collection of the Smithsonian Institution there is a specimen labeled "*Edwardsia sulcata?* Gloucester Mass. Verrill id." [identified]. This specimen is an *Edwardsia* with well-developed physa and eight deep, longitudinal furrows. The nemathybomes are collected in the middle line between the furrows but fairly irregularly in each compartment. It is probable that this displacement is caused by the very strong contraction of the body, but in any case the nemathybomes are apparently not scattered. I counted 14 tentacles, and there are probably never more than 16. The retractors (Fig. 1a) are strong, rather restricted with about 20 folds, several of them branched. The parietal muscles (Fig. 1b) are strong, though their distribution on the body wall is impossible to determine owing to the strong contraction and poor preservation of the specimen. The

¹ Received June 6, 1949.